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EXAMINER	
ARMSTRONG, ANGELA A	
ART UNIT	**PAPER NUMBER**
2654	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,395	ATTWATER ET AL.	
	Examiner	Art Unit	
	Angela A. Armstrong	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13-15,17-45,47 and 49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,13-15,17-45,47 and 49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-8, 20-24, 26-27, and 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Gilai et al (US Patent No. 6,018,736), hereinafter referred to as Gilai.

Gilai discloses a word-containing database accessing system for responding to ambiguous queries, including a dictionary of database words, a dictionary searcher and a database searcher.

2. Regarding claim 1, at col. 5, line 63 to col. 6, line 3, Gilai discloses the system accepts an ambiguous input from an ambiguous input generator and accesses a database on the basis of the ambiguous input received from the generator, in which the ambiguous input generator input is keystroke input or speech input, which reads on "a speech recognition apparatus."

At col. 6, line 50 to col. 7, line 6, and col. 11, line 50 to col. 12, line 29, Gilai discloses a dictionary comprises an alphabetical or phonetically ordered or otherwise ordered list of some or all words or strings appearing in the database which is to be accessed and a concordance associates the dictionary with the database, which reads on "a store of data containing entries to be identified and information defining for each entry a connection with a word of a first set of words and a connection with a word of a second set of words:"

At col. 17, line 66 to col. 18, line 13, Gilai discloses the ambiguous input generator can comprise a plurality of telephone instruments or other speech input devices to provide the ambiguous speech input to the database accessing unit via a probabilistic spoken character recognition device that is similar to conventional speech recognition units, which reads on "speech recognition means."

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the initialization process which uses the concordance to find the logical and physical location of all database entries that include the requested dictionary entry value in the appropriate context. For example, is the users supply the last name Smith, all entries with the last name of Smith are located, which reads on "control means operable: to control the speech recognition means to identify, by reference to recognition information for the first set of words, as many words of the first set as meet a predetermined criterion of similarity to first received voice signals;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box, which reads on "upon such identification, to compile a list of all words of the second set which are connected with entries connected also with the identified word(s) of the first set;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the output of the database lookup ad the candidate sorter is a list of a predetermined number of database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which reads on "to control the speech recognition means as

to identify, by reference to recognition information for the second set of words, at least one word of the list which resembles second received voice signals."

Regarding claim 2, at col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user, the similarity vector is continually updated and stores a similarity score of a corresponding database entry, which reads on "the speech recognition means is operable upon receipt of the first voice signal to generate for each identified word a measure of similarity with the first voice signal;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box and further discloses the output of the database lookup ad the candidate sorter is a list of a predetermined number of database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which reads on "the control means is operable to generate for each word of the list a measure obtained from the measures for the relevant words of the first set, and the speech recognition means is operable upon receipt of the second voice signal to perform the identification of one or more words of the list in accordance with a recognition process weighted in dependence on the measures generated for the words of the list."

Regarding claim 3, at col. 15, line 60 to col. 16, line 5, Gilai discloses, updating the best candidate box, such that a word similarity score may be added to the appropriate database entry similarity vector if the database entry already is in the best candidate box or added to the best candidate box, which reads on "the control means is operable to weight the measure for each

word of the list by a factor dependent on the number of words of the second set which are connected with entries connected also with the relevant identified word of the first set."

Regarding claim 4, at col. 8, line 5-9, Gilai discloses if the similarity score of and word is under a predetermined threshold, the score is considered to be zero, which reads on "the control means is operable to omit from the list those words of the second set having a measure below a predetermined threshold."

Regarding claim 5, at col. 17, line 66 to col. 18, line 13, Gilai discloses the ambiguous input generator can comprise a plurality of telephone instruments or other speech input devices to provide the ambiguous speech input to the database accessing unit via a probabilistic spoken character recognition device that is similar to conventional speech recognition units, which reads on "the apparatus includes a store containing recognition data for all words of the second set", since conventional speech recognition systems provide for a means for storing recognition data in a dictionary or database, and the system recognizes subsequent (second) words elicited from the user.

At col. 11, lines 20-49 and col. 15, lines 51-52, Gilai discloses the database lookup unit scan process scans all the database entries that were selected by the initialization process, which reads on "the control means is operable following the compilation of the list and before recognition of the words, of the list, to mark in the recognition data store those items of data therein which correspond to the words not in the list or those which correspond to words which are in the list, whereby the recognition means may ignore all words so marked or, respectively, not marked."

Regarding claim 6, at col. 11, line 50 to col. 12, line 12, Gilai discloses generation of N most probable strings and their probabilities, which reads on "the control means is operable following the compilation of the list to generate recognition data for each word of the list."

Regarding claim 7, at col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box and further discloses the output of the database lookup ad the candidate sorter is a list of a predetermined number of database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which reads on "the control means is operable to select for output entries defined as connected both with an identified word of the first set and an identified word of the second set."

Regarding claim 8, at col. 6, line 50 to col. 8, line 19, Gilai discloses a dictionary comprises an alphabetical or phonetically ordered or otherwise ordered list of some or all words or strings appearing in the database which is to be accessed and a concordance associates the dictionary with the database and also discloses the system has a conversation manager which may prompt the user to supply additional words or strings that are part of the database entry which is processed using the same database scan and lookup scheme, which reads on "a store of data containing entries to be identified and information defining for each entry a connection with a word of a first set of words and a connection with a word of a third set of words:"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the initialization process which uses the concordance to find the logical and physical location of all database entries that include the requested dictionary entry value in the appropriate context.

For example, is the users supply the last name Smith, all entries with the last name of Smith are located, which reads on "the control means is operable to compile a list of all words of the third set which are connected with entries also connected both with an identified word of the first set and an identified word of the second set;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box, which reads on "to control the speech recognition means to identify, by reference to recognition information for the third set of words, at least one word of the list which resembles third received voice signals."

Regarding claim 22, at col. 5, line 63 to col. 6, line 3, Gilai discloses the system accepts an ambiguous input from an ambiguous input generator and accesses a database on the basis of the ambiguous input received from the generator, in which the ambiguous input generator input is keystroke input or speech input, which reads on "a speech recognition apparatus."

At col. 6, line 50 to col. 7, line 6, and col. 11, line 50 to col. 12, line 29, Gilai discloses a dictionary comprises an alphabetical or phonetically ordered or otherwise ordered list of some or all words or strings appearing in the database which is to be accessed and a concordance associates the dictionary with the database, which reads on "a store of data containing entries to be identified and information defining for each entry a connection with a word of a first set of signals and a connection with a word of a second set of words:"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the initialization process which uses the concordance to find the logical and physical location of

all database entries that include the requested dictionary entry value in the appropriate context. For example, is the users supply the last name Smith, all entries with the last name of Smith are located, which reads on "means for identifying a received signal as corresponding to as many words of the first set as meet a predetermined criterion"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box, which reads on "control means operable to compile a list of all words of the second set which are connected with entries connected also with the identified signals of the first set;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the output of the database lookup and the candidate sorter is a list of a predetermined number of database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which reads on "speech recognition means operable to identify, by reference to recognition information for the second set of words, at least one word of the list which resembles received voice signals."

Regarding claim 23, at col. 6, lines 4-14, Gilai discloses implementation of a spellguess unit which is operative to select at least one string of symbols to which the ambiguous input might correspond, which reads on "the first set of signals are voice signals representing spelled versions of the words of the second set or portions;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the output of the database lookup and the candidate sorter is a list of a predetermined number of

database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which reads on "the identifying means includes the speech recognition means operating by reference to recognition information for the said spelled voice signals."

Regarding claim 24, at Figure 9, col. 6, lines 58-60 and col. 12, lines 13-21, Gilai discloses the processing of a numeric string via a keypad input that is processed by the spellguess unit to determine that caller's particular input and produces a list of the most probable strings, which reads on "the first set of signals are signals consisting of tones and the identifying means is a tone recognizer."

Regarding claim 34, at col. 5, line 63 to col. 6, line 3; and col. 17, line 66 to col. 18, line 42, Gilai discloses the system accepts an ambiguous input from an ambiguous input generator and accesses a database on the basis of the ambiguous input received from the generator, in which the ambiguous input generator input is keystroke input or speech input, and indicates the system prompts the user with requests to enter desired information, which reads on "an interactive voice recognition and response method for identifying at least one stored data base item comprising plural classes of mutually inter-related sub-items"

At col. 8, lines 35-38, Gilai discloses the system has a conversation manager which has as its output a suitable message to the user which received by a text-to-speech voice synthesizer, which reads on "issuing a synthesized voice request for a first speech input representing a first class of sub-item;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the initialization process which uses the concordance to find the logical and physical location of

all database entries that include the requested dictionary entry value in the appropriate context. For example, is the users supply the last name Smith, all entries with the last name of Smith are located, which reads on "performing speech recognition of said first speech input to identify at least one potentially corresponding first sub-item;"

At col. 7, lines 40-45, Gilai discloses the system may prompt the user via the conversation manager to enter a city of interest and subsequently to enter the name of a street of interest, which reads on "issuing a synthesized voice request for a second speech input representing a second class of sub-item;"

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses that after each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box, which reads on "compiling a list of second sub-items mutually inter-related with said identified first sub-item(s);

At col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the output of the database lookup and the candidate sorter is a list of a predetermined number of database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which reads on "performing speech recognition of said second speech input with respect to said compiled list to identify at least one potentially corresponding second sub-item from said list."

3. Regarding claims 20-21, 26-27, and 36, claims 20-21, 26-27, and 36 are similar in scope and content to claims 1-8, 22-24, and 34, and are rejected under similar rationale.

4. Claims 12, 14, 17, 38, 40, 42-43, and 46-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Lenning et al (US Patent No. 5,479,488), hereinafter referred to as Lenning.

Lenning discloses a method and apparatus for automation of directory assistance using speech recognition.

5. Regarding claim 12, at col. 4, lines 13-55 Lenning discloses a telecommunications system in which the automated voice processing unit is connected to a switching network and receives input signals which may be either voice or dual tone multifrequency signals, which reads on "A telephone information apparatus comprising: a telephone line connection;"

At col. 5, lines 39-61, Lenning discloses the voice processing unit will employ flexible vocabulary recognition technology which has several lexicons comprising groups of lexemes having common characteristics, which reads on "a speech recognizer for recognizing spoken words received via the telephone line connection, by reference to recognition data representing a set of possible utterances;"

At col.7, line 48 to col. 9, line 15 and col. 10, lines 20-58, Lenning discloses implementation of priori probabilities to enhance the speech recognition capabilities of the voice processing unit which uses a statistical relationship between the origin of a call and its destination, calculates a probability of an originating locality, a destination locality, determines when a destination locality is also the originating locality. Lenning also discloses the probability index for a particular lexicon (locality or other determined lexicons) can be used to weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt,

thereby improving the speed and accuracy, which reads on "means responsive to receipt via the telephone line connection of signals indicating the origin of a telephone call to access stored information identifying a subset of the set of utterances and to restrict the recognizer operation to that subset."

Regarding claim 17, at col. 4, lines 13-55 Lenning discloses a telecommunications system in which the automated voice processing unit is connected to a switching network and receives input signals which may be either voice or dual tone multifrequency signals, which reads on "A telephone information apparatus comprising: a telephone line connection;"

At col. 5, lines 39-61, Lenning discloses the voice processing unit will employ flexible vocabulary recognition technology which has several lexicons comprising groups of lexemes having common characteristics, which reads on "a speech recognizer for recognizing spoken words received via the telephone line connection, by reference to one of a plurality of stored sets of recognition data;"

At col.7, line 48 to col. 9, line 15 and col. 10, lines 20-58, Lenning discloses implementation of priori probabilities to enhance the speech recognition capabilities of the voice processing unit which uses a statistical relationship between the origin of a call and its destination, calculates a probability of an originating locality, a destination locality, determines when a destination locality is also the originating locality. Lenning also discloses the probability index for a particular lexicon (locality or other determined lexicons) can be used to weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt,

thereby improving the speed and accuracy, which reads on "means responsive to receipt via the telephone line connection of signals indicating the origin of a telephone call to access stored information identifying one of the sets of recognition data and to supply this set to the recognizer."

At col. 10, lines 42-44, Lenning discloses the voice processing unit can be bilingual or multilingual, which reads on "the stored sets correspond to different languages or regional accents."

Regarding claim 38, at col. 4, lines 13-55 Lenning discloses a telecommunications system in which the automated voice processing unit is connected to a switching network and receives input signals which may be either voice or dual tone multifrequency signals, which reads on "A telephone information apparatus comprising: a telephone line connection;"

At col. 5, lines 39-61, Lenning discloses the voice processing unit will employ flexible vocabulary recognition technology which has several lexicons comprising groups of lexemes having common characteristics, which reads on "a speech recognizer for recognizing spoken words received via the telephone line connection, by reference to recognition data representing a set of possible utterances;"

At col.7, line 48 to col. 9, line 15 and col. 10, lines 20-58, Lenning discloses implementation of priori probabilities to enhance the speech recognition capabilities of the voice processing unit which uses a statistical relationship between the origin of a call and its destination, calculates a probability of an originating locality, a destination locality, determines when a destination locality is also the originating locality. Lenning also discloses the probability index for a particular lexicon (locality or other determined lexicons) can be used to

weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt, thereby improving the speed and accuracy, which reads on "means responsive to receipt via the telephone line connection of signals indicating the destination of a telephone call to access stored information identifying a subset of the set of utterances and to restrict the recognizer operation to that subset."

6. Regarding claims 14, 40, 42-43, 46, and 48, claims 14, 40, 42-43, 46, and 48 are similar in scope and content to claims 12, 17 and/or 38 and are rejected under similar rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 18-19 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lenning (US Patent No. 5,479,488) in view of well known prior art.

8. Regarding claims 18-19 and 44-45, at col. 4, lines 13-55 Lenning discloses a telecommunications system in which the automated voice processing unit is connected to a switching network and receives input signals which may be either voice or dual tone multifrequency signals, which reads on "A telephone information apparatus comprising: a telephone line connection;"

At col. 5, lines 39-61, Lenning discloses the voice processing unit will employ flexible vocabulary recognition technology which has several lexicons comprising groups of lexemes having common characteristics, which reads on "a speech recognizer for recognizing spoken words received via the telephone line connection, by reference to one of a plurality of stored sets of recognition data;"

At col.7, line 48 to col. 9, line 15 and col. 10, lines 20-58, Lenning discloses implementation of priori probabilities to enhance the speech recognition capabilities of the voice processing unit which uses a statistical relationship between the origin of a call and its destination, calculates a probability of an originating locality, a destination locality, determines when a destination locality is also the originating locality. Lenning also discloses the probability index for a particular lexicon (locality or other determined lexicons) can be used to weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt, thereby improving the speed and accuracy, which reads on "means responsive to receipt via the telephone line connection of signals indicating the origin of a telephone call to access stored information identifying one of the sets of recognition data and to supply this set to the recognizer."

At col. 4, lines 51-55, Lenning teaches the interconnecting data network can be any well known data network. Lenning does not specifically teach at least two of the sets of recognition data correspond to characteristics of different types of telephone apparatus, such as a mobile telephone channel. However, providing mobile users with access to data and services provided to landline telephone users was well known in the art.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Lenning to allow for recognition data corresponding to a mobile telephone apparatus, for the purpose of providing the services to mobile subscribers as well as other telephone users, thereby allowing mobile telephone users the conveniences and services of automated directory assistance in the various mobile environments.

9. Claims 9-11, 25, 28-33, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilai (US Patent No. 6,018,736) in view of Lenning (US Patent No. 5,479,488).

10. Regarding claim 9, Gilai does not specifically teach "means to store at least one of the received voice signals." However, storing a received input signal in a database accessing system was well known in the art.

In a similar field of endeavor, Lenning teaches a method and apparatus for automation of directory assistance using speech recognition and specifically provides for recording the users input for subsequent playback to an operator if the call cannot be handled entirely automatically (col. 3, lines 22-28, col. 4, lines 33-35).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Gilai to record the user's input, as taught by Lenning, for the purpose of supplying the recording for subsequent playback to an operator if the call cannot be handled entirely automatically.

At col. 6, line 50 to col. 8, line 19, Gilai discloses a dictionary comprises an alphabetical or phonetically ordered or otherwise ordered list of some or all words or strings appearing in the database which is to be accessed and a concordance associates the dictionary with the database and also discloses the system has a conversation manager which may prompt the user to supply additional words or strings that are part of the database entry which is processed using the same database scan and lookup scheme and col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the initialization process which uses the concordance to find the logical and physical location of all database entries that include the requested dictionary entry value in the appropriate context. For example, is the users supply the last name Smith, all entries with the last name of Smith are located, which reads on "the apparatus being arranged to perform an additional recognition process in which the control means is operable to control the speech recognition means to identify, by reference to recognition information for one set of words, a plurality of words of that set which meet a predetermined criterion of similarity to the respective received voice signals; to compile an additional list of all words of another set, which are connected with entries connected also with the identified words of the one set; and to control the speech recognition means to identify, by reference to recognition information for the other set of words, at least one word of the said additional list which resembles the respective received voice signals."

Regarding claim 10, Gilai discloses performing an improvement similarity score of any zero-scoring word, which reinitiates the original similarity check to check if the new similarity score differs from zero, which reads on "means to recognize a failure condition and to initiate the said additional recognition process only in the event of such failure being recognized."

Regarding claim 11, Gilai does not specifically teach determining the origin or destination of a telephone call to restrict the recognition operation to a subset of vocabulary words.

At col. 5, lines 39-61, Lenning discloses the voice processing unit will employ flexible vocabulary recognition technology which has several lexicons comprising groups of lexemes having common characteristics, which reads on "a speech recognizer for recognizing spoken words received via the telephone line connection" and at col.7, line 48 to col. 9, line 15 and col. 10, lines 20-58, Lenning discloses implementation of priori probabilities to enhance the speech recognition capabilities of the voice processing unit which uses a statistical relationship between the origin of a call and its destination, calculates a probability of an originating locality, a destination locality, determines when a destination locality is also the originating locality. Lenning also discloses the probability index for a particular lexicon (locality or other determined lexicons) can be used to weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt, thereby improving the speed and accuracy, which reads on "means responsive to receipt via the telephone line connection of signals indicating the destination of a telephone call to access stored information identifying a subset of the set of utterances and to restrict the recognizer operation to that subset."

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the database accessing system of Gilai to determine a probability index for various lexicons to be used to weight the selection of certain lexemes and that the use of several

lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt, as suggested by Lenning, for the purpose of improving speed and accuracy of the recognition system.

11. Regarding claims 25, 28-33 and 37; claims 25, 28-33, and 37 are similar in scope and content to claims 9-11, and are therefore rejected under similar rationale.

12. Claims 13 and 39 rejected under 35 U.S.C. 103(a) as being unpatentable over Lenning (US Patent No. 5,479,488) in view of Gilai (US Patent No. 6,018,736).

13. Regarding claims 13 and 39, at col. 5, lines 39-61, Lenning discloses the voice processing unit will employ flexible vocabulary recognition technology which has several lexicons comprising groups of lexemes having common characteristics, which reads on "a store containing recognition data for all words of the sets."

Lenning does not specifically teach marking selective words in the dictionary and using the marking as an indication to ignore or not ignore the marked words.

At col. 11, lines 20-49 and col. 15, lines 51-52, Gilai discloses the database lookup unit scan process scans all the database entries that were selected by the initialization process and discloses the initialization process which uses the concordance to find the logical and physical location of all database entries that include the requested dictionary entry value in the appropriate context. For example, is the users supply the last name Smith, all entries with the last name of Smith are located, which reads on "the control means is operable following the compilation of the list and before recognition of the words, of the list, to mark in the recognition data store those items of data therein which correspond to the words not in the list or those

which correspond to words which are in the list, whereby the recognition means may ignore all words so marked or, respectively, not marked."

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Lenning to implement marking selective words of the dictionary and using the marking as an indication to ignore or not ignore the marked words, as suggested by Gilai, for the purpose of processing only database entries that are in an appropriate context, as also suggested by Gilai, which would reduce system processing and recognition time.

14. Claims 15, 41, 47 and 49 rejected under 35 U.S.C. 103(a) as being unpatentable over Borcherding (EPO 0477688 A2) in view of Lenning (US Patent No. 5,479,488).

15. Regarding claim 15, Borcherding discloses a method for dialing a telephone using voice recognition. At col. 6, lines 3-52, Borcherding discloses the process of dialing using the system in which the caller speaks a dial command, which reads on "a telephone line connection;" Additionally, at col. 6, lines 3-52, Borcherding discloses the system identifies the caller by various means such as identifying the caller's voice with speaker dependent recognition, which reads on "a speech recognizer for determining or verifying the identity of the speaker of spoken words received via the telephone line connection, by reference to recognition data corresponding to a set of possible speakers;"

Borcherding does not provide the specific details of the processing of the speaker recognition to identify the speaker, such that the recognition process determines the origin of the telephone call to identify a subset of the recognition data of which to restrict the processing.

At col.7, line 48 to col. 9, line 15 and col. 10, lines 20-58, Lenning discloses implementation of priori probabilities to enhance the speech recognition capabilities of the voice processing unit which uses a statistical relationship between the origin of a call and its destination, calculates a probability of an originating locality, a destination locality, determines when a destination locality is also the originating locality. Lenning also discloses the probability index for a particular lexicon (locality or other determined lexicons) can be used to weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt, thereby improving the speed and accuracy, which reads on "means responsive to receipt via the telephone line connection of signals indicating the origin of a telephone call to access stored information identifying a subset of the set and to restrict the recognizer operation to that subset."

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the system of Borcherding to determine a probability index for various lexicons to be used to weight the selection of certain lexemes and that the use of several lexicons each comprising a group of lexemes allows the voice processing unit to restrict the field of search for each prompt, as suggested by Lenning, for the purpose of improving speed and accuracy of the recognition system, as also suggested by Lenning.

16. Regarding claims 41, 47, and 49; claims 41, 47 and 49 are similar in scope and content to claim 15, and are therefore rejected under similar rationale.

Response to Arguments

Applicant's arguments filed July 21, 2004, have been fully considered but they are not persuasive.

17. Applicant argues Gilai fails to disclose each element required by claims 1, 20, and 21. The Examiner disagrees and argues at col. 6, line 50 to col. 7, line 6, and col. 11, line 50 to col. 12, line 29, Gilai discloses a dictionary comprises an alphabetical or phonetically ordered or otherwise ordered list of some or all words or strings appearing in the database which is to be accessed and a concordance associates the dictionary with the database, at col. 17, line 66 to col. 18, line 13, Gilai discloses the ambiguous input generator can comprise a plurality of telephone instruments or other speech input devices to provide the ambiguous speech input to the database accessing unit via a probabilistic spoken character recognition device that is similar to conventional speech recognition units, at col. 7, line 46 to col. 8, line 34; and col. 15, line 27 to col. 16, line 48, Gilai discloses the initialization process which uses the concordance to find the logical and physical location of all database entries that include the requested dictionary entry value in the appropriate context. For example, is the users supply the last name Smith, all entries with the last name of Smith are located. After each word is supplied by the user a candidate sorter extracts a predetermined number of the highest scoring similarity vector components and stores these components in a best candidates box, and the output of the database lookup and the candidate sorter is a list of a predetermined number of database entries which are most similar to the words supplied by the user thus far, sorted according to their similarity scores, which provides adequate support for a) controlling a speech recognition means to identify words of a first set which meet a predetermined criterion of similarity to a

first voice signal, b) compiling a list of words of a second set ("best candidate box") which are connected with database entries connected also with the identified words of the first set, and c) controlling the speech recognition means to identify at least one word of the list which resembles second received voice signals being recognized in accordance with a list of particular words of a second set of words which are connected with entries connected also with the identified words of the first set.

Applicant argues "a speech recognition means which has had its vocabulary dynamically reduced depending upon previously received signals is used to identify further received voice signals through the above claimed features. Nowhere in Gilai is a dynamically reduced vocabulary of a speech recognizer disclosed." In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., dynamically reduced vocabulary of a speech recognizer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As the claims do not specifically recite a limitation that reduces the vocabulary of the recognizer, so as to dynamically restrict the identification of received voice signals from the words contained only within a list compiled from the identification of previously identified voice signals. The claims recite that there is a reference to the recognition information, for which Gilai provides adequate support via the similarity scores and the candidate sorter.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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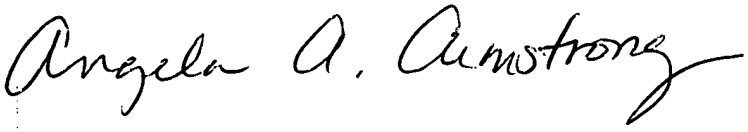
Art Unit 2654



AAA
November 18, 2005